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# EXPRESSION OF THE GIVEN/NEW CONTRAST IN REFERENTIAL COMMUNICATION: A STUDY OF SEVEN- AND NINE-YEAR-OLD CHILDREN

Valérie Sauvaire and Monique Vion<sup>1</sup>

## Abstract

*Monolingual French-speaking children (7- and 9-year-old boys and girls) were asked to describe reversible events for peers. Addressees had some information about one of the two characters involved in each event, but this information was either restricted to the character's identity or extended to his/her semantic role (agent vs patient). The way speakers introduced each character and linked together given and new information for the addressee was studied. The linguistic devices used varied with the kind of information to be communicated. The way the speaker's discourse was formulated changed with age.*

*Key words: Language acquisition, given/new contrast, referential communication.*

*Mots-clés : Acquisition du langage, information connue et nouvelle, communication référentielle.*

The desire to communicate one's own representations of the world under the best conditions possible generally leads the speaker to take into account a certain number of parameters that characterize the utterance situation (Bronckart, 1985, 1988).

More precisely speaking, the relevance of the statements made is based on a set of conjectures regarding the addressee. The model a speaker constructs of his/her conversational partner (Steedman & Johnson-Laird, 1980) involves a certain number of suppositions about the partner's current knowledge (Clark & Carlson, 1981; Clark & Marshall, 1981). The speaker assumes that the addressee has knowledge of certain information that is both readily available and easy to activate (given information). He or she also assumes that other information is unknown, and therefore is not yet related to the rest of the addressee's knowledge (new information). The relevant processing of this new information by the addressee depends on how well the speaker is able to properly formulate the message.

All languages provide their speakers with various devices for making the pragmatic distinction between given and new information in discourse<sup>2</sup>. In the referential system of French, for example, the speaker can use pronouns and definite or indefinite articles. In addition, French has other devices and constructions that the speaker can use for contrast (intonation, introductory devices and cleft constructions, dislocation).

A great deal of developmental research in various languages has been aimed at studying how speakers master the available linguistic devices (see Hickmann (1982) and Hupet (1987) for a review on this subject).

Paradoxically, studies attempting to account for the way subjects mark the givenness or newness of the referents introduced into a discourse have dealt with verbalizations produced in "ecologically" inadequate situations. Indeed, in most cases, the experimenter requests the verbalization of events that he/she is also

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<sup>1</sup> Université de Provence, CREPCO, URA CNRS 182 29 av. R. Schuman, 13621 Aix-en-Provence Cedex, France

<sup>2</sup> For a debate on this question, see Clark and Clark (1977), Chafe (1976), Givón (1984), MacWhinney (1977).

observing<sup>3</sup>. It follows that such circumstances do not create an optimal context for testing children's ability to produce statements that refer in an appropriate manner to given and new information. From the point of view of communicative efficiency, it becomes unnecessary under such conditions to introduce discourse referents, since they are being perceived by both partners.

For this same reason, this utterance situation also favors the deictic use of determiners. It masks the emergence of the correct use of the definite/indefinite contrast to introduce new referents. Situations in which the speaker and listener do not share the knowledge of the to-be-described event would be more appropriate for observing the development of this ability.

Not only do the "conventional" data gathering situations elicit descriptions addressed to an already informed listener, but they also lead to verbal productions aimed at a partner who, by virtue of his/her status, is attributed a linguistic expertise level above the speaker's own level. It has been shown recently that the fact that these situations are likened to school situations influences the language of both children and adults (Vion, Piolat, & Colas 1989).

Some other remarks might also be made concerning the above studies. Depending on the amount of knowledge the listeners are assumed to have, speakers establish a hierarchical order for the discourse information through the conjunction of linguistic devices. For example, they oppose the definite and indefinite quality of articles. Yet most studies, even those claiming to deal with how children handle given and new information, have in fact examined the way in which each referent, taken alone, is introduced into the statements, and not with whether or not the conjunction of the linguistic devices used in the discourse is appropriate.

Finally, let us mention that most of the research involving this type of task analyzes the contrasts used to oppose referential information expressed in the form of nouns or pronouns (objects or persons). Little is known (MacWhinney & Bates, 1978; Vion & Colas, 1987) about the way in which children refer in their productions to given or new information about relationships (e.g. actions between two persons, the spatial layout of objects, or the semantic role of a character).

The following experiment is aimed at studying the way in which seven- and nine-year-old children communicate information to their peers, in cases where the peers are known to have partial knowledge of the event that will be described to them. It attempts in particular to determine how they refer in their verbalizations when it is limited solely to the referred-to character's identity and when it is extended to cover his/her semantic role (agent *vs.* patient).

## METHOD

### 1.1. Establishment of shared knowledge

The idea behind this experiment was to obtain verbalizations in a situation in which speaker and addressee only share knowledge of part of the information, the other part being known to the speaker only. The technique employed was derived from Hupet and Kreit's method (1983). In this technique, drawings are presented to the speaker, accompanied by some brief remarks. The first drawing shows a character who will be the agent or patient in the event depicted in the second drawing. This character is the "given" part of the event represented in the second drawing. In our experiment, event constituents were also introduced in two stages, but in such a way that the given part of the event was sometimes restricted solely to the identity of the character, and sometimes also included his/her semantic role. Four presentation modes were derived by crossing the following two, two-modality factors: the context factor, defined according to whether the remarks accompanying the first drawing pertained to a character playing the role of agent (C1) or patient (C2); and the extent factor, defined by whether the remarks excluded (E1) or included (E2) what action was to be performed in the second drawing. In the latter case, the semantic role of the character was defined. Table 1 illustrates the presentation modes by means of an example.

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<sup>3</sup> Events are sometimes staged by means of toys (Bresson, 1974; Warden 1976) or a series of drawings (Coustoulin, 1985; Emslie & Stevenson, 1981; Hupet & Kreit, 1983; Kail, Hickmann, & Emmenecker, 1987; Karmiloff-Smith, 1979, 1981; MacWhinney & Bates, 1978; Power & Dal Martello, 1986; Vion & Colas, 1987).

TABLE 1. Presentation of information. Series (a): "Un indien visant un cowboy" (An indian shooting a cowboy).

		Shared information	Information known only to the speaker
Remarks <i>Commentaires</i>	Character <i>Personnage</i>	an Indian <i>un indien</i>	a cowboy being shot <i>un cowboy visé</i>
	Agent	an Indian shooting <i>un indien visant</i>	a cowboy being shot <i>un cowboy</i>
	Character <i>Personnage</i>	a cowboy <i>un cowboy</i>	an Indian shooting <i>Un indien visant</i>
	Patient <i>Patient</i>	a cowboy being shot <i>un cowboy visé</i>	an Indian <i>un indien</i>

The remarks accompanying the first drawing determined the topic of the description. It was up to the speaker to formulate the description after having constructed his/her own representation of the two-part event depicted.

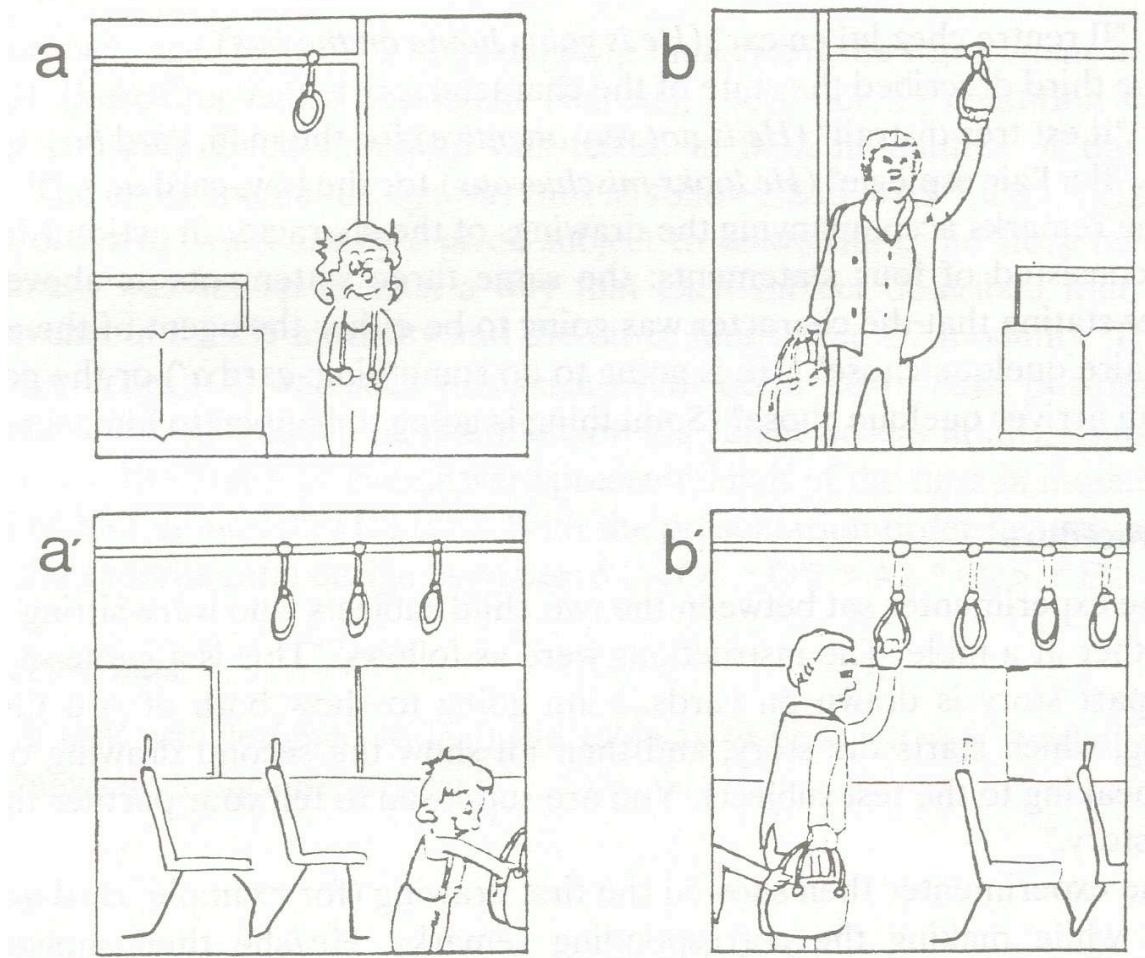
## 1.2. Material

1.21. The material consisted of eight series of drawings representing reversible events, each with three constituents: an agent, an action, and a patient, as follows:

- (a) An Indian shooting a cowboy
- (b) A mason knocking out a painter
- (c) A lady combing a girl's hair
- (d) A boy robbing a man
- (e) A bandit shooting a policeman
- (f) A boy spraying water on another boy
- (g) A man hitting another man
- (h) A pirate killing a captain

Each series of drawings consisted of four 6x6-cm cards (figure 1), two presenting the front view of each of the characters (cards a and b), and two presenting the side view of the agent and patient in action (cards W and b').

Figure 1. Experimental material. Series (d): "Un garçon volant Un monsieur" (A boy robbing a man)



The drawings were done in cartoon style. For each series, the characters were represented in a single setting so that the actors could be situated in time and space. For example, the characters in event (d) were in a bus.

To make sure that the children could unambiguously distinguish the two actors in a given series, characters belonging to different series were made to look different by the clothes they wore, the color of their clothes, their approximate ages, etc.

Before starting the actual experiment, the children's ability to name all of the involved referents was checked by questioning other children of the same age who were not participating in the experiment.

1.2.2. Each card was accompanied by a given set of remarks. For example, for series (d), the remarks accompanying the front views of the characters consisted of three statements.

The first introduced the character:

"C'est l'histoire d'un homme" (*This is the story of a man*).

"C'est l'histoire d'un garçon" (*This is the story of a boy*).

The second placed the character in a setting (*same remark for both characters*):

"Il rentre chez lui en car" (*He is going home on the bus*).

The third described the state of the character:

"Il est très distrait" (*He is not very attentive*) for the man, card b.

"Il a l'air espiègle" (*He looks mischievous*) for the boy, card a.

The remarks accompanying the drawings of the character in action (the side view) consisted of four statements: the same three statements as above, plus another stating that the character was going to be either the agent of the action: "Il va faire quelque chose" (He is going to do something: card *a*) or the patient: "Il va lui arriver quelque chose" (Something is going to happen to him: card *b*).

### 1.3. Procedure

The experimenter sat between the two child subjects who were sitting facing each other at a table. The instructions were as follows. "This is a game in which a two-part story is drawn on cards. I am going to show both of you the first drawing, which starts the story, and then I'll show the second drawing only to you (speaking to the test subject). You are supposed to tell your partner the rest of the story."

The experimenter then showed the first drawing (for example, card *a* in figure 1) while making the corresponding remarks. He/she then showed the second drawing (*b*) to the test subject and asked him/her to continue by saying, "Now, tell him/her..."

### 1.4. Subjects

Two groups of children were selected (age factor): the first group was composed of seven-year-olds (second graders: mean age 7;6), and the second group consisted of nine-year-olds (fourth graders: mean age 9;5)<sup>4</sup> Both groups had the same number of subjects and an equal number of boys and girls. These age groups were chosen because children of this age are known to be able to efficiently use articles to handle the given/new contrast when referents are not mutually perceived (shown by Hickmann, 1987, and Warden, 1981). The experiment required two types of subjects: speakers (test subjects) and listeners. The children were attributed roles as follows:

32 7-year-old speakers (16 boys and 16 girls)

32 9-year-old speakers (16 boys and 16 girls)

16 7-year-old listeners (8 boys and 8 girls)

16 9-year-old listeners (8 boys and 8 girls)

The listeners participated twice, with two different children of their own age.

### 1.5. Experimental design

For each age (factor A), one subgroup underwent the experiment in condition C1 (hereafter called the agent context); the other, in condition C2 (the patient context). Each subgroup was tested in both modalities of the extent factor. The experimental design was thus as follows:  $S16 <A2 * C2> * E2$ .

In order to avoid asking a given subject to relate the same story twice, the experiment was set up in such a way that each subject described four of the eight events in the E1 modality and the other four in the E2 modality. The presentation order (0) was such that each event occurred in each position, preceded or followed by each of the other events (eight orders in all). Thus, for a given order, the first four events were presented half of the time in modality E1, the other half in modality E2 (0'). With the presentation order factors incorporated, the experimental design becomes:  $S_i <08 * 0'2 * A2 * C2> * E2$ .

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<sup>4</sup> The experiment was conducted in three primary schools in La Penne sur Huveaune, Bouches-du-Rhône, France: Ecole de la Candolle, Ecole de Beau Soleil, and Ecole de la Gare. We would like to thank the entire staff of these schools for having received us.

## 1.6. Predictions

The task was designed to lead the subjects to produce short verbalizations of the "news announcement" type.

Two ways of adapting their formulation to their partner's knowledge were possible. Either only that part of the information not shared by both partners could be verbalized, or the entire event could be verbalized, including both new and given information. In the first case, the introduction of a new character should be done by means of an indefinite article (definite articles and pronouns being correctly used to mark given information). In the second case, the givenness or newness of the characters should be appropriately marked by one of the following two pairs of devices: [definite article, indefinite article], [pronoun, indefinite article].

The different presentation modes used to establish the shared knowledge of the partners should allow us to specify what choices were made in each of the circumstances by the children in each age group.

## 2. RESULTS

Whenever a piece of information is considered to be known by the addressee, the speaker can refrain from verbalizing it without hindering communication. Omission of event constituents was thus examined prior to analysis of any of the experimental factors. Very few cases of event constituent ellipsis were in fact found in the 512 productions obtained<sup>5</sup> (64 subjects x 8 events). Omission of the agent was rare (2.7%). The action and the patient were omitted more often (although the total proportion of elisions never exceeded 10%). Failure to state the action does not appear to have depended on the factors manipulated in this experiment. On the other hand, omission of the patient was significantly less frequent when the remarks used to establish the topic of the description only stated the identity of the character, without mentioning his/her role (EI) (effect of E:  $F(1/60) = 16$ ,  $p < 1.03e^{-3}$ ). It looks as though speaking of the action for the first time made it seem more necessary to mention the patient.

The data was analyzed in two ways.

The first method, as in conventional studies, involved analyzing *how each of the characters was introduced into the discourse* by looking at the first verbalized occurrence of the character in question. Five referential devices were observed here. A character was either introduced with an article (definite or indefinite), a pronoun (definite or indefinite), or a possessive adjective. The subjects' use (coded 1) or non-use (coded 0) of a given device to introduce either the agent or the patient was input into ten analyses of variance with the following design:  $S16 < C2 * A2 > * E2$ <sup>6</sup>.

The second type of analysis consisted of examining the *pairs of devices used for introduction*.

The eight matrices given in Tables 2 and 3 are the product of the modalities of the three experimental factors. The five introduction modes specified above, plus ellipsis, are indicated for each of the entries. Readers may follow the discussion of these data by referring to the matrix headings for results pertaining to the analyses of variance, and to the cells for an analysis of how introduction devices were paired.

### 2.1. Introduction modes for each character

#### 2.1.1. Occurrences of agent introduction modes (horizontal headings in the matrices)

More than half of the time (52.5%), the agent was introduced by a *pronoun*.

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<sup>5</sup> A production refers to a subject's entire set of utterances following presentation of the second drawing. Productions ranged from one simple sentence (with or without expansion) to a sequence of sentences or clauses.

<sup>6</sup> The comments that follow take all of the observed significant effects into account.

*Definite* pronouns, the most frequent (46.7%), were generally used in the agent context (effect of C:  $F(1/60) = 541.9$ ,  $p < 1e^{-5}$ ), where they are an appropriate device for continuing the topic established in the remarks: (d) "*Il va enlever le sac à un monsieur*" (*He's going to take the man's bag*). Definite pronouns were more frequently used in this case by 9-year-olds than by 7-year-olds (effect of A:  $F(1/60) = 3.27$ ,  $p < .07$ ). The older children exhibited more flexibility in the use of this device, which they tended to employ less in the patient context (CxA interaction effect:  $F(1/60) = 5.25$ ,  $p < .02$ ), where it would be inappropriate. When the introductory remarks had specified the semantic role of the character (E2), the use of definite pronouns increased (effect of E:  $F(1/60) = 4.59$ ,  $p < .03$ ), although this was only true for 7-year-olds (ME interaction effect:  $F(1/60) = 4.59$ ,  $p < .03$ ), whose performance here was equivalent to that of the older children who were insensitive to variations in the introductory remarks.

*Indefinite* pronouns (infrequent: 5.8%) only occurred in the patient context (effect of C:  $F(1/60) = 18.44$ ,  $p < 7e^{-5}$ ) where they were used to express the newness of an unspecified agent: (1) "*Après quelqu'un vient l'arroser*" (Then someone comes and sprays water on him), or "*On lui lance de l'eau*" (literally: *One* is throwing water on him). This was observed especially in 7-year-olds (A and CxA effects:  $F(1/60) = 6.63$ ,  $p < .01$ ).

Whenever the agent was introduced with a noun, the noun was preceded by an article (42.6%). 11.1% were definite articles while 31.4% were *indefinite* articles.

With the exception of four instances, indefinite articles were found only in the patient context (effect of C:  $F(1/60) = 223.5$ ,  $p < 1e^{-5}$ ), where they constitute an appropriate means of introducing the newness of the agent: (c) "*Ya une dame qui vient la coiffer*" (There's a lady who is coming to comb her hair). In this context, the frequency of indefinite article was highest in the E1 condition, where agent and action were both to be communicated as new information (CXE interaction effect:  $F(1/60) = 4.21$ ,  $p < .04$ ).

Seven-year-olds used more *definite* articles than 9-year-olds did (effect of A:  $F(1/60) = 3.53$ ,  $p < .06$ ).

Only a minor portion of the productions contained possessives (2.1%). *Possessive adjectives* were only used to introduce the agent when the topic of the remarks had focused on the patient. For certain events, the introduction of the patient in the remarks established a relationship between the patient and the agent which did not explicitly mark the agent's newness via the determiner of the noun: (c) "*C'est sa maman qui la coiffe*" (It's *her* mother that's combing her hair).



TABLE 2. Answers in the agent context (number of subjects). 0 = omission.

EXTENT 1		EXTENT 2						
Introduction of agent (given information): 7-year-olds		Introduction of agent (given information): 7-year-olds						
Introduction of patient (new information)	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.	
	0		1				1	
	Def. art.	5	11				16	
	Def. pro.	1	1				2	
	Pos. adj.		7				7	
	Ind. pro.		4				4	
	Ind. art.	2	11	20		1	34	
Tot.	2	17	44	0	0	1	64	
EXTENT 1		EXTENT 2						
Introduction of agent (given information): 9-year-olds		Introduction of agent (given information): 9-year-olds						
Introduction of patient (new information)	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.	
	0		3				3	
	Def. art.	2	17				19	
	Def. pro.						0	
	Pos. adj.		9				9	
	Ind. pro.		3				3	
	Ind. art.		29			1	30	
Tot.	0	2	61	0	0	1	64	
EXTENT 1		EXTENT 2						
Introduction of agent (given information): 7-year-olds		Introduction of agent (given information): 7-year-olds						
Introduction of patient (new information)	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.	
	0		5				5	
	Def. art.	2	13			1	16	
	Def. pro.		1				1	
	Pos. adj.		5				5	
	Ind. pro.		3				3	
	Ind. art.	1	32			1	34	
Tot.	0	3	59	0	0	2	64	
EXTENT 1		EXTENT 2						
Introduction of agent (given information): 9-year-olds		Introduction of agent (given information): 9-year-olds						
Introduction of patient (new information)	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.	
	0		6				6	
	Def. art.	2	18				20	
	Def. pro.	2	3				6	
	Pos. adj.		13				13	
	Ind. pro.		2				2	
	Ind. art.	1	16				17	
Tot.	2	4	58	0	0	0	64	

TABLEAU 2. Réponses dans le contexte agent (nombre de sujets), 0 = omission.

TABLE 3. Answers in the patient context (number of subjects). 0 = omission.

EXTENT 1

Introduction of agent (new information): 7-year-olds

	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.
0		1				8	9
Def. art.		2	1		9	16	28
Def. pro.	2	2		2	2	10	18
Pos. adj.							0
Ind. pro.							0
Ind. art.		3	1		1	4	9
Tot.	2	8	2	2	12	38	64

EXTENT 2

Introduction of agent (new information): 9-year-olds

	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.
0						4	4
Def. art.		2	1	2		20	25
Def. pro.	2	6	1	1		22	32
Pos. adj.							0
Ind. pro.							0
Ind. art.					3		3
Tot.	2	8	2	3	0	49	64

EXTENT 2

Introduction of agent (new information): 7-year-olds

	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.
0		1				6	7
Def. art.		2	2		6	12	22
Def. pro.	3	3	6	1	6	10	29
Pos. adj.							0
Ind. pro.							0
Ind. art.		2				4	6
Tot.	3	8	8	1	12	32	64

EXTENT 2

Introduction of agent (new information): 9-year-olds

	0	Def. art.	Def. pro.	Pos. adj.	Ind. pro.	Ind. art.	Tot.
0						2	2
Def. art.		3	1		2	11	17
Def. pro.	3	3	4	5	4	21	40
Pos. adj.							0
Ind. pro.			0				0
Ind. art.		1				4	5
Tot.	3	7	5	5	6	38	64

TABLEAU 3. Réponses dans le contexte patient (nombre de sujets), 0 = omission.

### 2.1.2. Occurrences of patient introduction modes (vertical headings in the matrices)

More often than agents, patients were expressed by means of noun phrases beginning with an *article*.

*Definite* articles were the most frequent (31.8%), and were generally used to speak of patients who had been the topic of the remarks (effect of C:  $F(1/60) = 3.2$ ,  $p < .07$ ): (d) "Après ya un garçon qui se tient a la barre et il a pris le sac au monsieur qui rentre chez lui en car" (Then there's a boy holding onto the bar and he took the man's bag as he was going home on the bus). It should be noted here that the inappropriate use of a definite article in the agent context was frequent (27.8%) (Table 2): (d) "Il fouille le sac du monsieur" (He is searching through *the* man's bag).

*Indefinite* articles were used most frequently to introduce the patient following remarks focusing on the agent (effect of C:  $F(1/60) = 41.3$ ,  $p < 1e^{-05}$ ). They were used to mark the newness of the patient: (b) "Le maçon assomme *un* monsieur" (The mason is knocking out *a* man). They were more frequently used at age 7 than 9 (effect of A:  $F(1/60) = 4.58$ ,  $p < .013$ ). The two preceding factors interact with the extent factor, however (AxCxE interaction:  $F(1/60) = 5.68$ ,  $p < .02$ ). Although the A and C effects were cumulative when the remarks only pertained to a character's identity (E1), a drop in the frequency of indefinite articles was observed in E2 for 9-year-olds. It looks as though the children explicitly marked the newness of the patient whenever the action was also new.

Whenever a *pronoun* was employed (27.3%), it was almost always a definite pronoun. Very few indefinite pronouns were found (2.3%), all of which occurred in the agent context. Indefinite pronouns are an appropriate device, but are not a very specific way of referring to the patient: (g) "Il frappe *quelqu'un*" (He's hitting *someone*).

*Definite* pronouns were almost never used (9 occurrences) to introduce the patient in the agent context (effect of C:  $F(1/60) = 91.01$ ,  $p < 1e^{-05}$ ). Therefore, they do indeed express the givenness of the character in the patient context: (d) "Ya un petit garçon qui *lui* prend des trucs dans sa valise" (There's a little boy who is taking things from *him* out of his suitcase). The older children used definite pronouns more often (effect of A:  $F(1/60) = 6.01$ ,  $p < .04$ ). The occurrence of such pronouns depended upon the extent of the introductory remarks: remarks specifying the semantic role of the character (E2) led to an increase in the use of pronouns (effect of E:  $F(1/60) = 10.2$ ,  $p < 2.23e^{-03}$ ), especially for 7-year-olds (AxCxE:  $F(1/60) = 4.3$ ,  $p < .04$ ).

The same tendencies were observed here as for agent introduction: older children generally, and appropriately, used pronouns to refer to known characters, and younger children used them particularly when the introductory remarks had specified the character's semantic role.

The use of *possessive* adjectives was rare (6.6%), although more frequent than for introducing an agent. Possessives were only used to introduce a patient in the agent context (effect of C:  $F(1/60) = 34.1$ ,  $p < 1e^{-05}$ ): (g) "Il bat *son* fils" (He is beating *his* son). They were used especially by 9-year-olds (effect of A:  $F(1/60) = 4.8$ ,  $p < .03$ ) (Table 2). This device, which as we have already seen does not explicitly mark the newness of a character, is a witness to the fact that the children's interpretation of the events went beyond the simple description of the drawings.

## 2.2. Introduction pairs used

This analysis method was used to assess the relevance, in communication, of the *conjunction* of devices, i.e. what devices were used in conjunction<sup>7</sup> with each other. The occurrences of each device pair observed is given in the matrices in Tables 2 and 3.

The percentage of productions with appropriate conjunction<sup>6</sup> varied between 50% and 70%, depending on the experimental condition (Table 4). The best scores were attained in the patient context when the remarks had only specified the identity of the character (E1).

TABLE 4. Percentage of device conjunctions appropriately accounting for the given/new contrast in each experimental condition. (The percentage shown in parentheses pertains to the conjunctions involving articles and pronouns only.)

	Context			
	Agent		Patient	
	E1	E2	E1	E2
Age 7	65.6 (54.7)	64.1 (56.3)	60.9 (57.8)	54.7 (53.1)
Age 9	64.1 (50)	50 (29.7)	70.3 (65.6)	67.2 (59.4)

In this context (Table 3), essentially two device pairs were found. The [indefinite article, definite article] pair ("*Un indien tue le cowboy*": *An Indian is killing the cowboy*), which nominalizes the patient, occurred in the majority of the 7-year-old productions. The [indefinite article, definite pronoun] pair ("*Un indien tire sur lui*": *An Indian is shooting him*"), which pronominalizes the patient, was preferred by 9-year-olds. A tendency to nominalize the patient less when the preliminary remarks (E2) had introduced him/her as such was noted for both ages.

Finally, in this context, no inappropriate types of conjunction were found to be particularly frequent.

In the agent context (Table 2), the [definite pronoun, indefinite article] pairs like "*Il tue un cowboy*" (*He's killing a cowboy*) were predominant at both ages, regardless of the extent of the introductory remarks. The 7-year-olds tended to nominalize the agent whenever only the agent's identity had been specified in the remarks (E1). This tendency was manifested by the use of [definite article, indefinite article] pairs: "*L'indien tue un cowboy*" (*The Indian is killing a cowboy*). The 9-year-old children also had a greater tendency to employ possessive adjectives to refer to the patient, particularly in E2 when the agent had been marked as such in the remarks: "*Il arrose son père*" (*He's spraying water on his father*) [definite pronoun, possessive adjective].

As the first analysis led us to predict, one particular inappropriate combination was frequent: the [definite pronoun, definite article\*] pair, where only the givenness of the agent was marked:

<sup>7</sup> Referring to a character with a possessive adjective is an appropriate means of introduction, although this tactic does not explicitly mark newness by means of a determiner.

"*Il tue le\* cowboy*" (*He's killing the\* cowboy*). This type of pair occurred in 17% to 28% of the productions, depending on the experimental condition.

### 3. DISCUSSION

The above analysis confirmed certain known facts, and also brought out some new ones.

These findings support previous results obtained for various languages, including Hungarian, Italian, English (MacWhinney & Bates, 1978) and French (Vion & Colas, 1987). At the ages being studied here (seven and nine), the two most frequent ways of introducing a character (with an indefinite article or a definite pronoun) were nearly always used to communicate the newness or givenness of the characters, although definite articles were also used in both cases.

This last result brings up a methodological question. The task chosen here enabled us to more closely adapt the discourse parameters to our goal. Our hope was that this adaptation would eliminate the inappropriate use of definite articles (as determiners of nouns referring to new information). This did not in fact occur.

Various reasons might be given to account for this. No one factor can be considered as the exclusive source of the phenomenon, although each of the reasons provides a more precise understanding of the explanations given in prior studies.

First, the experimental material may be inherently biased. The events staged involve characters and situations (a cowboy, an Indian, fighting, etc.) that are stereotyped enough to induce reference by means of generic terms: (a) "*Il va tuer le cowboy*" (He is going to kill *the* cowboy). This is most likely the main reason for the observed phenomenon.

In addition to this explanation, we might mention that some (although few) of the "definite" expressions may have been due to the subjects' dialect. For example, there were several occurrences of the following construction of the verb "aller" (to go) in (c) "*Elle va au coiffeur*" (She's going to *the* hairdresser's), which is frequent in the French spoken in southern France (Tuaillon, 1983).

Also, formulations such as (g) "*Il se bat contre l'autre*" (He is fighting with *the* other person) can be considered as "set" expressions, or at least as terms that can be used anywhere, and thus indicate less language control on the part of the speaker. This explanation based on variations in language control is supported by our analysis of the conjunction of linguistic devices. Inappropriate definite articles generally occurred in the agent context, where they were used to introduce the patient's identity (new). This in fact is the most widespread case found in language, i.e. the case in which the topic of the utterance to be constructed is the agent. Hupet and Kreit (1983), who showed how ineffective the creation of a patient context was in producing passive utterances with the patient as topic, stressed the inhabitual nature of the latter production situation. In the present experiment, when the subjects were required to make the communicative effort to organize their utterances around the patient (given information), definite articles were not found to be used extensively to refer to the agent, unlike in the agent context, where they were found very frequently in reference to the patient.

Finally, it should be noted that the search for ecological relevance does not eliminate the experimental nature of the task. Speakers may still refrain from taking into account the knowledge base they share with their addressees, in which case they use definite articles in a deictic manner. However, we must be careful here not to become a source of bias in the analysis. The generally accepted procedure in the paradigm specific to these studies is to analyze the first verbalization of a given referent. This criterion (applied in

the present study) does not take into account the fact that in oral communication, the only way the speaker can correct his/her production is to further specify it "after the fact": (0 "Il va arroser *l'autre*, son ami" (He is going to spray water over *the* other person, his friend). More precisely speaking, the progressive accuracy mechanism is one of the characteristics of the collaborative process used to establish references in dialogue (Clark & Wilkes-Gibbs, 1986). Adaptation of the task in an attempt to render it more ecologically realistic also means ensuring that the analysis criteria are suitable to the characteristics of the production processes implemented.

In addition to confirming already observed tendencies, the results obtained here bring out several other phenomena.

For example, they show that at the ages studied, the conjunction of the linguistic means provided by the French language is done in such a way that communication of information is optimal in approximately two out of three productions.

They indicate a general tendency to pronominalize the agent and nominalize the patient.

They also show that the use of definite pronouns to refer to a known character is more frequent in older children, younger children preferring definite articles.

But above all, these findings reveal some of the qualitative changes in "ostensive" behavior that are occurring at both of the ages in question<sup>8</sup>. 7 In this study, the nature of the remarks made by the experimenter to establish mutual knowledge was a means of controlling the availability of information about a character's semantic role. By controlling the extent of shared knowledge (knowledge of the identity of a character vs. knowledge of his/her identity and semantic role), we were able to observe changes in statement formulation in cases exhibiting the appropriate conjunction of devices. While the 9-year-olds generally employed definite pronouns to introduce known characters, the 7-year-olds more often used them to do so when the remarks had previously indicated the character's semantic role. While 7-year-olds used indefinite articles uniformly to refer to new characters, 9-year-olds stopped using them, favoring possessive adjectives whenever the remarks had specified the semantic role of a known character. This seems to indicate that in order to make information processing as efficient as possible, subjects are capable of changing their discursive mode according to the extent of the knowledge shared with the addressee. Thus, the same type of introductory remarks caused the younger children to change from enumeration to description, while leading the older children, now experts in the expression of descriptions, to change from description to narration.

## RESUME

*On a demandé à des sujets francophones unilingues (garçons et filles de 7 et 9 ans) d'effectuer pour un pair la description d'un événement renversable (agent-action-patient). Les interlocuteurs disposaient de la connaissance conjointe d'une*

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<sup>8</sup> Showing something to someone is 'ostensive' behavior. Sperber and Wilson (1986) state that behavior that manifests one's intention to make something manifest is ostensive: "Ostension provides two layers of information to be picked up; first, there is the information which has been, so to speak, pointed out; second, there is the information that the first layer of information has been intentionally pointed out." (p. 50).

*partie de l'information relative à chaque événement. L'information partagée soit se limitait à la connaissance de l'identité du personnage, soit incluait en outre la connaissance du rôle (agent vs patient) de ce dernier. On étudie la manière dont les locuteurs introduisent chacun des personnages référés et articulent ce qui est nouveau avec ce qui est connu. On observe une variation des choix linguistiques en fonction de l'information à transmettre ainsi qu'une évolution dans la formulation des propos avec l'âge.*

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